

MONITORING PLAN

The publicly-mandated goal of the Coeur d'Alene Lake Management Plan is to "improve water quality slowly" in each of the four water quality management zones. Numeric criteria were developed for several important water quality variables to help assess progress toward that goal as the plan's management actions are implemented. The numeric criteria are for concentrations of dissolved oxygen, total phosphorus, and zinc, clarity (secchi-disc transparency), and coliform bacteria counts; they are listed in Tables 31 to 33.

A monitoring plan has been designed that can be used to evaluate the effectiveness of management actions in attaining the management plan's goal. The monitoring plan is comprised of several elements:

- 1) periodic sampling of Coeur d'Alene Lake for index water quality variables;
- 2) addition of nutrient sampling at selected municipal wastewater treatment plants;
- 3) continuation of several existing monitoring programs; and
- 4) compilation of ancillary data for tracking trends that have the potential to affect water quality in the lake.

The sampling program for index variables in the lake is patterned after the 1991-93 lake study and focuses on variables with numeric criteria such as concentrations of dissolved oxygen, total phosphorus, and zinc, and clarity. The data collected by this phase of the monitoring plan represents the lake's response to loadings of nutrients and trace

elements from its drainage basin. Reduction of dissolved oxygen deficits is a primary goal of the management plan. In the deep, open water zone, dissolved oxygen profiles should be measured monthly, beginning in mid summer and continuing until late autumn, in order to assess the yearly cycle of dissolved oxygen depletion within the hypolimnion at limnetic stations 1, 3, and 4 (figure 4).

Water temperature profiles and barometric pressure should be measured concurrently in order to compute percentage saturation of the dissolved oxygen concentrations. In the southern lake zone, the deficit develops earlier in the summer, therefore, profiles of dissolved oxygen and temperature should be measured monthly between early summer and early autumn. Additional samples should be taken during the dissolved oxygen profiling in order to assess trophic state trends. A composite sample of the euphotic zone should be analyzed for concentrations of total phosphorus, chlorophyll-a, and dissolved cadmium, lead and zinc, at a minimum.

Secchi disc transparency should be measured as an index of clarity and can then be multiplied by a factor of 2.5 to estimate euphotic zone depth. The nearshore zone should also be monitored by sampling at selected stations that represent a range of nutrient enrichment. Each nearshore station would be sampled in August for concentrations of total phosphorus and dissolved zinc; dissolved inorganic nitrogen analyses would be optional.

Several municipal wastewater treatment plants, permitted under the National Pollutant Discharge Elimination System (NPDES), were identified within the management plan as potential candidates for reductions of

nutrient loadings delivered to Coeur d'Alene Lake. Their current NPDES permits do not include monitoring of the phosphorus and nitrogen concentrations of their effluents. Such monitoring needs to be incorporated into their permits in order to track the trends in their loadings to the lake. If management actions are implemented at these plants to reduce nutrient loads, then the monitoring data can be used to assess the effectiveness of those actions.

Several monitoring programs already are operational at Coeur d'Alene Lake; they need to be continued and coordinated with new monitoring programs developed by this lake management plan. The Coeur d'Alene Tribe has recently implemented monitoring as part of its fisheries program. Their monitoring stations include Benewah, Chatcolet, Hidden, and Round Lakes and several nearshore stations within reservation boundaries.

The City of Coeur d'Alene's Wastewater Division has periodically measured dissolved oxygen and nutrients in a depression near the lake's outlet. Water quality at this station appears to be adversely affected by the long-term storage of logs in Cougar Bay. Continued monitoring is advisable and should be augmented with analyses of dissolved trace elements when dissolved oxygen concentrations are reduced to nearly anoxic levels, as has been recently measured. The Panhandle Health District is responsible for monitoring coliform bacteria in lake areas used by the public for primary and secondary contact recreation. This ongoing program could be expanded to include monitoring of additional nearshore areas with evidence of nutrient enrichment.

A primary purpose of monitoring is to assess trends and the effectiveness of management actions. In order to gain a better perspective on trends, the monitoring data should be evaluated in conjunction with information on other factors that can affect the variables being monitored. Often, this information is routinely available from ongoing, long-term programs. For example, additional scientific data includes precipitation, heat budgets, streamflow quantity and lake residence time, and unusual climatic or hydrologic events. Data on trends in demographics and economic development should be tracked to assess resource demands that may affect lake water quality. Specific examples of such data include building permits, septic system permits, and production figures for agriculture and timber harvest. The effectiveness of management actions will be assessed with monitoring data, but it is also important to monitor the implementation of management actions. A centralized data base can be established that contains information such as type of management action, its location, dates of implementation, and amount (acres of macrophytes harvested, length of streambank riprapped, length of riparian habitat fenced, etc.).

SUMMARY

Based on the results of the 1991-93 lake study, one can conclude that, at present, Coeur d'Alene Lake is an oligotrophic water body whose lakebed sediments contain highly enriched concentrations of trace elements. Historic data indicated the lake had received substantial loadings of nutrients and oxygen-demanding substances since the late 1800's. Beginning in the early 1970's, these loadings began to be reduced as municipal wastewater treatment plants became operational and forest practices and agriculture activities began to implement best management practices. As a result, the lake's trophic state shifted from mesotrophic to oligotrophic as the lake's biological productivity declined. That decline, coupled with the lake's large assimilative capacity for nutrients (determined by the nutrient load/lake response model), has reduced the potential for development of an anoxic hypolimnion and the consequent release of trace elements and nutrients back into the overlying water column.

The primary goal of this lake management plan is to implement management actions that will preserve the improvements in water quality that have been gained by Coeur d'Alene Lake since the 1970's. These fairly recent improvements in water quality could be eroded by the present pattern of rapid increases in population growth, lake usage, and land development now occurring throughout the basin. The management plan also seeks improvements in water quality where needed to achieve compliance with federal and state water quality criteria.

The water quality management actions recommended for the four water quality

management zones are weighted heavily toward reducing nutrient loadings produced by point and nonpoint sources within the basin. The purpose of these reductions is to achieve a sequence of three responses within Coeur d'Alene Lake: reduced in-lake nutrient concentrations; reduced biological production by phytoplankton, periphyton, and macrophytes; and a reduced hypolimnetic dissolved oxygen deficit.

Coupled with this strategy to manage the lake's trophic state and thereby prevent releases of trace elements and nutrients out of the lakebed sediments is the desire to reduce water column concentrations of zinc so they will not exceed federal water quality criteria for the protection of freshwater aquatic life. Reduced zinc concentrations are to be achieved largely through reductions in zinc loadings produced within the Coeur d'Alene River Basin.

The environmental factors controlling phytoplankton production in lakes are numerous; nutrients, particularly phosphorus, have repeatedly been found to be major factors. Trace elements have infrequently been reported as significantly affecting phytoplankton production, either as a nutritional deficiency or as a toxicant. In the case of Coeur d'Alene Lake, the phytoplankton bioassays indicated that the biologically-available, dissolved concentrations of zinc in the northern two-thirds the lake exerted a strong suppression on phytoplankton growth. Similar results were also reported by two studies conducted on the lake in the early 1970's. These results raise an important issue for water quality management in Coeur d'Alene Lake: If zinc concentrations are reduced enough to comply with federal water quality criteria, will the

lake's phytoplankton production markedly increase? If the answer to the question is affirmative, then nutrient loadings will need to be reduced, perhaps significantly, in order to counteract the lifting of zinc's suppressive effect on phytoplankton production.

DEFINITION OF ACRONYMS

Numerous acronyms are used throughout the document. They are defined as follows:

- * ACOE, U.S. Army Corps of Engineers
- * ACP, Agricultural Conservation Program
- * ASCS Agricultural and Stabilization Service
- * BC, Benewah County
- * BLM, U.S. Bureau of Land Management
- * CAC, Citizen's Advisory Committee for CBIG,
- * CBIG, Coeur d'Alene Basin Interagency Group
- * CBRP, Coeur d'Alene Basin Restoration Project
- * CES, Cooperative Extension Service, University of Idaho
- * CLCC, Clean Lakes Coordinating Council
- * CT, Coeur d'Alene Tribe
- * DEQ, Idaho Division of Environmental Quality
- * EPA, U.S. Environmental Protection Agency
- * FG, Idaho Department of Fish and Game
- * FPA, Idaho Forest Practices Act
- * FPAAC, Forest Practices Act Advisory Committee
- * ICL, Idaho Conversation League
- * IDHW, Idaho Department of Health and Welfare
- * IDL, Idaho Department of Lands
- * DWR, Idaho Department of Water Resources
- * IFC, Idaho Forestry Council
- * ILA, Idaho Loggers Association
- * IPR, Idaho Department of Parks and Recreation
- * ITD, Idaho Department of Transportation
- * IWR, Idaho Department of Water Resources
- * KC, Kootenai County
- * NIBCA, North Idaho Building Contractors Association
- * NRCS, Natural Resource Conservation Service
- * NRDA, Natural Resources Damage Assessment
- * PAC, Panhandle Area Council
- * PHD, Panhandle Health District
- * AWQP, State Agricultural Water Quality Program
- * SC, Shoshone County
- * SCD, Soil Conservation Districts
- * UI, University of Idaho
- * USCG, U.S. Coast Guard
- * USDA, U.S. Department of Agriculture
- * USFS, U.S. Forest Service
- * USFWS, U.S. Fish and Wildlife Service
- * USGS, U.S. Geological Survey
- * WPCA, Water Pollution Control Account
- * WWC, Waterways Commission
- * WWP, Washington Water Power.

REFERENCES

- Benewah Soil and Water Conservation District**, 1990, Agricultural pollution abatement plan, Plummer Creek watershed: 104 p., 5 appendices.
- Coeur d'Alene Basin Restoration Project**, 1994, Draft Coeur d'Alene Lake Management Plan, April 1994: Coeur d'Alene, Coeur d'Alene Basin Restoration Project, 20p.
- Cooke, G.D., Welch, E.B., Peterson, S.A., and Newroth, P.R., 1993, Restoration and management of lakes and reservoirs: Boca Raton, Florida, Lewis Publishers, 548 p.
- Davenport, R.W.**, 1921, Coeur d'Alene Lake, Idaho, and the overflow lands: U.S. Geological Survey Water-Supply Paper 500-A, 31p.
- Funk, W.H., Rabe, F.W., and Filby, Royston**, 1973, The biological impact of combined metallic and organic pollution in the Coeur d'Alene-Spokane River drainage system: Moscow, Idaho, Water and Energy Resources Research Institute, 202 p.
- Funk, W.H., Rabe, R.W., Filby, Royston, Bailey, Gary, Bennett, Paul, Shah, Kisher, Sheppard, J.C., Savage, N.L., Bauer, S.B., Bourg, A.C.M., Bannon, Gerald, Edwards, George, Anderson, Dale, Syms. Pat, Rother, Jane, and Seamster, Alan**, 1975, An integrated study on the impact of metallic trace element pollution in the Coeur d'Alene-Spokane Rivers-lake drainage system: Moscow, Idaho Water and Energy Resources Research Institute, 332 p.
- Harris, C.C., Timko, S.E., and McLaughlin, W.J.**, 1989, An approach to assessing community tourism potential-results for four north Idaho Communities-1990 to 1995: Moscow, University of Idaho, 31 p.
- Horowitz, A.J., Elrick, K.A., and Cook, R.B.**, 1993, Effect of mining and related activities on the sediment trace element geochemistry of Lake Coeur d'Alene, Idaho, USA, part I-surface sediments: Hydrological Processes, v.7, p. 403-423.
- Horowitz, A.J., K.A., Robbins, J.A., and Cook, R.B.**, 1994, Effect of mining and related activities on the sediment trace element geochemistry of Lake Coeur d'Alene, Idaho, USA, part II-subsurface sediments: Hydrological Processes, v.X, p. xx-xx.
- Hudson, Jelaco, and Welch, Comer** 1993, Peak and valley-10 steps to long-term economic stability: Coeur d'Alene, Idaho, Welch-Comer Engineers.
- Idaho Department of Commerce**, 1992, County profiles of Idaho: Boise, Idaho Department of Commerce, [variously paginated].
- Idaho Department of Employment**, 1993, Panhandle employment, July 1993: Coeur d'Alene, 8 p.

Idaho Department of Parks and Recreation, 1993, 1993 Idaho wetland conservation prioritization plan, summary: Idaho Department of Parks and Recreation, 20 p., 3 apps.

Idaho Department of Water Resources, 1993, Developing a land use and land cover database of the Coeur d'Alene Basin using LANDSAT thematic mapper data: Boise, Idaho Department of Water Resources, 29 p.

Kootenai County Planning Commission, 1993, Kootenai County Comprehensive Plan: Coeur d'Alene, Kootenai County Planning Commission, 229 p.

Kootenai-Shoshone Soil Conservation District, 1991, Agricultural pollution abatement plan, Lake Creek watershed: 97 p., 5 appendices.

Kuwabara, J.S., Woods, P.F., Beckwith, M.A., Backsen, R.L., and Ashenmacher, D.M., 1994, The effects of elevated zinc concentrations on phytoplankton growth in Lake Coeur d'Alene, Idaho: Paper presented at Fall 1994 American Geophysical Union meeting, San Francisco, CA.

Panhandle Area Council, 1993, Overall economic development program for north Idaho: Coeur d'Alene, Panhandle Area Council, 66 p.

Reiman, B.E., 1980, Coeur d'Alene Lake limnology: Idaho Department of Fish and Game, Lake and Reservoir Investigations, Job Performance Report F-72-R-2, p. 27-68.

Soil Conservation Service, 1994a, Geology report, Coeur d'Alene River cooperative river basin study: Boise, ID, 27 p., 4 appendices, 13 plates.

Soil Conservation Service, 1994b, Coeur d'Alene River cooperative river basin study: Boise, ID, 69 p.

U.S. Bureau of Land Management, 1993, Recreation management plan for the Coeur d'Alene Lake recreation management area: Coeur d'Alene, Idaho, Bureau of Land Management District Office, 39 p.

U.S. Department of Agriculture, 1984, General soil map and landform provinces of Idaho: Boise, Idaho, Soil Conservation Service, 1 sheet.

U.S. Environmental Protection Agency, 1977, Report on Coeur d'Alene Lake, Benewah and Kootenai Counties, Idaho: Washington, D.C., National Eutrophication Survey Working Paper no. 778, 20 p., 5 apps.

U.S. Environmental Protection Agency, 1990, The lake and reservoir restoration guidance manual: Washington D.C., EPA-440/4-90-006, 326 p.

Woods, P.F., 1989, Hypolimnetic concentrations of dissolved oxygen, nutrients, and trace elements in Coeur d'Alene Lake, Idaho: U.S. Geological Survey Water-Resources Investigations Report 89-4032, 56 p.

Woods, P.F. and Berenbrock, Charles,
1994, Bathymetric map of Coeur d'Alene
Lake, Idaho: U.S. Geological Survey
Water-Resources Investigations Report 94-
xxx, 1 sheet.

Woods, P.F., 1994, Shift in trophic state
of Coeur d'Alene Lake, Idaho, 1975-1992:
Paper presented at Canada/United States
Technical Workshop on the Upper
Columbia River Basin: An International
Dialogue, November 15-16, 1994,
Spokane, Washington, P. xx-xx.

Woods, P.F. and Beckwith, M.A., in
press, Nutrient and trace-element
enrichment of Coeur d'Alene Lake, Idaho:
U.S. Geological Survey Open-File Report
95-xx, xp.

APPENDIX A

List of Technical Advisory Group Members

DEVELOPMENT T.A.G.

Chairman
Plummer-Gateway Hwy Dist.

Pat Allen
Shoshone County

Dale Beeks
The Network

Pierre Bordenave
Intermountain Resources

Jerry Botts
Benewah County Planning
& Zoning

Larry Comer
Welch Comer Engineers

Roy Cook
Coeur d'Alene C of C NRC

John Crouter
KEA

Maria Dobson
City of Harrison

Sandy Emerson
CDA C of C NRC

Shireene Hale
Panhandle Health District

Deb Hamm
The Network

Kim Hanna
CDA Assn. of Realtors

Harvey Hansen

Bud Harvey

Rogene Hingston
Spokane River Association

Dave Karsann
Idaho Dept. of
Transportation

Paul Klatt
J-U-B Engineers

Chris Hardy
Coeur d'Alene Tribe

Carl Mattingly
SF CDA River Sewer
District

Bill McKenna
Lakeshore Construction

Ray Mobberley
Worley Highway District

Mike Mongelli
Shoshone County Planning
& Zoning

Gloria Palmer

Buddy Paul
CDA Lake Homeowners
Association

Anne Pressentin
IDEQ

Lisa Prochnow
CLCC
Panhandle Health District

Pat Raffee
Concerned Businesses

Ken Renner
Eastside Highway District

Jan Scharnweber
KEA

Clyde Sheppard
Spokane River Association

John Tindall
IDEQ

Rand Wichman
Kootenai County Technical
Services Div.

Rhonda Wilcox
City of Harrison

Karen Williams
KEA

Dave Yadon
City of Coeur d'Alene
Planning Department

Al Vogel
St. Maries Gazette-Record

RECREATION T.A.G.

Mike Anderson
Kootenai County
Commissioner

Phillip Cernera
Coeur d'Alene Tribe

Roy Cook

Tom Ellefson

Mike Galloway

Peter Grubb

Shireen Hale
Panhandle Health Dist.

Harry Hansen

Don Matthews

Dr. O.B. Scott

Mar. Sheriff Niles Shirley

Jeff Thomas
Kootenai County Sheriff

SOUTH LAKE T.A.G.

John Daniels
Coeur d'Alene Tribal Member

Gene Hedlund

Dr. Bill Latshaw
Round Lake

Jess Marratt, Facilitator
Coeur d'Alene Tribe

George Mills, Jr.
Benewah County Commission

Bill Morris
Idaho Farm Bureau

Lisa Prochnow
CLCC
Panhandle Health District

Gregory Runyan
St. Maries Wild Rice

Mitch Silvers
Idaho Dept. of Parks & Rec.

AGRICULTURE T.A.G.

David Brown
USDA-SCS

Mike Combes
SCS-Benewah County

Bob Hanson
KEA

Kathie Hasselstrom
SCC

Kootenai-Shoshone SCD

Phil Lampert
Benewah SCD

Robert Mahler
University of Idaho
Dept. of Soil Science

Vickie Parker-Clark
UI Coop. Ext. Service

Lisa Prochnow
CLCC
Panhandle Health District

Mike Schlepp
Save Our River Env.

Fred Schoenick
Benewah Cattlemen's
Assn.

Kelly Scott
St. Joe Valley Assn.

Al Sharon
KEA

Ed Tulloch, Facilitator
IDEQ

Jim Wilson
Kootenai-Shoshone
Cattlemen's Assn.

FOREST T.A.G.

Director, Assn. of
Logging Contractors, Inc.

Jim Colla
Idaho Dept. of Lands

Bill Cook
Bureau of Land Mgmt.

Chip Corsi
Idaho Dept./Fish & Game

Chris Hardy
Coeur d'Alene Tribe

Joe Hinson
Intermt. Forest Ind. Assn.

Ed Javorka, Facilitator
Coeur d'Alene Tribe

Dean Johnson
Idaho Dept. of Lands

Joan Kerttu
Idaho Forest Owners Assn.

Janel McCurdy
CDA Tribe Forest Mgr.

Dale McGreer
Potlatch Consultant

Mike Mihelich
KEA

Ron Payton
SCS

Lisa Prochnow
CLCC
Panhandle Health District

Gary Rahm
Idaho Panhandle Nat. Forests

Chris Schnepf
US AG Extension Office

Brett Stinnert
Plum Creek Corp.

Brian Sugden
Plum Creek Lumber Co.

Larry Wright
Potlatch Corp.

RIVERS T.A.G.

Art Bookstrom
USGS Geologic Division

Jerry Botts
Benewah County Planning &
Zoning

Ray Bradley
Kootenai County Waterways
Adv. Com.

Bill Dreisbach
Benewah Canoers

Dan Felton
River Subdivisions

Chuck Finan
Coeur d'Alene Tribe

Frank Frutchey
SORE

Harvey Hansen
Benewah Co. Waterway
Adv. Com.

Dolly Hartman
St. Joe Valley Assoc.

Bud Harvey
St. Joe River Boat Club

Geoff Harvey, Facilitator
IDEQ

Eric Johnson
WWP

Ken Knoblock
Idaho Dept. of Water Res.

Farrell Krupp

John Nigh
Idaho Dept./Fish & Game

Will Pitman
Idaho Dept. of Lands

Lisa Prochnow
CLCC
Panhandle Health District

Gregg Rayner
US Army Corps of
Engineers

Fred Schoenick

Bill Seaton
Shoshone County
Waterways
Adv. Com.

Eric Shulbert
KEA

Mitch Silvers
Heyburn State Park

Neil Smith
St. Joe Valley Assn.

Les Soul
Army Corps of Engineers

Mike Stevenson and
Terry Kincaid
Bureau of Land Mgmt.

Melinda Wetzell-Smith

APPENDIX B

**Listing of priority and general concerns expressed by the
public during public meetings of July 1993**

Letter sent to public participants at Lake Planning meetings.

October 12, 1993

Subject: Public input on Lake Coeur d'Alene Management Plan

During July a series of public meetings were sponsored by the Idaho Division of Environmental Quality and the Coeur d'Alene Tribe. these meetings were designed to identify the issues and concerns most important to the general public in order, if possible, to incorporate them into the Lake Coeur d'Alene Management Plan.

The agency indicated that a summary of the discussions would be distributed to those meeting participants who provided names and addresses. Enclosed is a summary of the issues and concerns expressed by the participants at each meetings.

The Lake Management Plan workgroup will study these issues and concerns as a part of its work. Wherever possible the group will attempt to incorporate those which are relevant into the plan alternatives. Some, which are beyond the scope of a Lake Management Plan, will be forwarded to the appropriate government official or legislator for response.

Draft alternatives for the lake plan are projected to be developed by January 1994. At that time another round of public meetings will be scheduled in order to obtain public input and comment on the draft alternatives.

If you have questions concerning the issues summary of the lake planning process, please address them to me at (208) 769-1448.

Sincerely,

Geoffrey W. Harvey
Idaho Department of Environmental Quality

Enclosure

Coeur d'Alene (day) GROUP A

Priority Concerns

- 1) Involve public with policy making on lake and surrounding land.
- 2) Public supported ombudsman for lake issues.
- 3) Fish and Wildlife habitat improvement to include public ownership of shoreline and improvement for these purposes.
- 4) Educate public about proper use of the lake and waters.
- 5) Lack of enforcement of existing rules and regs.

General Concerns

- * More monitoring of ag and timber activities.
- * Maintain human and wildlife co-habitation and use of the lake area.
- * Drainage control and increased rate of runoff from more intense uses.
- * Speed, noise, shoreline erosion from boating activities.
- * Reduce input of heavy metals into lake by 80%.
- * Reduce density of shoreline development and increase setbacks.
- * Educate public about proper use of the lake waters.
- * Overuse of lake for recreation use (big boats, jet skis, noise).
- * Control overuse and abuse of lake development.
- * Fish & wildlife habitat improvement to include public ownership of shoreline and improvement for these purposes.
- * Lack of enforcement of existing rules and regs.
- * Reduce nutrient input from sewage systems, ag and boats.
- * Involve public with policy making on lake and surrounding land.
- * Promote and support common sense use of resources, wildlife, recreation and economic opportunities.
- * Large wakes.
- * Public supported ombudsman for lake issues.
- * Stop use of lake for transport and storage of logs.
- * Heavy taxation causing accelerated of large parcels.
- * Tax level.
- * Protect Rathdrum aquifer from degradation.

Coeur d'Alene (day) GROUP B

Priority Concerns

- 1) Stormwater from residential and recreation roads.
- 2) Erosion (shoreline).
- 3) Implementation of lake management plan.
- 4) Development of effective regulatory tools.
- 5) Agricultural impacts.

General Concerns

- * Erosion (shoreline).
- * Implementation of Lake Management Plan.
- * Stormwater from residential and recreation roads.
- * Expanding superfund to entire basin.
- * Septic wastewater/boat gray water.
- * Development of effective regulatory tools.
- * Agriculture impacts.
- * Timber harvests.
- * Reduce upstream sediment loading.
- * Control development density of shoreline.
- * Control of marine noxious weeds.
- * Emphasis on wetland protection.
- * Steep slope development (safety and aesthetics).
- * Erosion on old roads and trails.
- * Regional sewage treatment facility.
- * Airborne pollution.

Coeur d'Alene (day) GROUP C

Priority Concerns

- 1) Local economy, custom and culture and people, i.e. natural resource economy.
- 2) Family recreation, public use, access.
- 3) Base action on proof. What is real and needed?
- 4) Balance ecosystem management.
- 5) Local and state control.

General Concerns

- * Local economy, custom and culture and people (i.e. natural resource economy).
- * Family recreation, public use and access.
- * Fund and enforce implementation.
- * Industry participation.
- * Local and state control.
- * Coordination and reconciliation at all levels, agreement.
- * Base action on proof. What is real and needed?
- * Balanced ecosystem management.
- * Health.
- * Realistic use of lake.
- * Fighting Creek landfill.

Coeur d'Alene (day) GROUP D

Priority Concerns

- 1) Identify demonstratable health risks.
- 2) Concern over nutrient loading and eutrophication (ag, logging activities, development, stormwater, etc.)
- 3) Noise from boats and jet skis.
- 4) Unchecked residential and other development.
- 5) Safe for recreation use (fishable/swimmable) and others (special resource water).

General Concerns

- * Are there feasible means to remediate contaminants within the watershed?
- * Do we need a complete aquifer study to complete knowledge base?
- * Number and size of boats (aesthetic fulfillment and enjoyment).
- * Erosion of banks and shores by boats.
- * Protection of downstream water quality.
- * Noise -- boats and jet skis.
- * Lack of enforceable regs on recreation and development.
- * Safe for recreational use (fishable/swimmable) as in special use designation (special resource water).
- * Identify demonstratable health risks
- * Industrial use by logging -- transportation, storage, handling.
- * Pave county roads next to lake (dust).
- * Shortage of outdoor facilities (recreational support).
- * Concern over nutrient loading and eutrophication (sediment plus others).
- * Total cost of remediation with and without litigation.
- * Recreational use (fishing/boating) versus commercial use.
- * Unchecked residential development (subdivisions).
- * Information on how to live in this area, i.e. heavy metal problems, lake use, fish, gardens, development. Impact of heavy metals on wildlife.
- * Population growth exceeding capacity of natural systems and infrastructure.
- * Protection of domestic water -- ground and surface.

Coeur d'Alene (day) GROUP E

Priority Concerns

- 1) Elimination of nutrient inputs for prevention of weed growth.
- 2) Better enforcement of forest practices rules to prevent erosion and nutrient inputs.
- 3) Prevent sedimentation from ag, grazing activities, nutrients, bacteria.
- 4) Forestry.
- 5) Fisheries impacts from above.

General Concerns

- * Development pressures.
- * Elimination of nutrient inputs for prevention of weed growth.
- * Better enforcement of forest practices rules to prevent erosion and nutrient inputs.
- * Prevent sedimentation from agriculture, grazing activities, nutrients, bacteria.
- * Forestry.
- * Fisheries impacts from above.
- * Union Pacific Railroad right of way.
- * Pollutants of concern: nutrients (forestry, ag, livestock and residential).
- * Pollutants of concern: sediments (forestry, ag, livestock, residential and mining).
- * Quality of life due to increased population and recreation, ie. noise, trash, sanitation, visual. Lack of enforcement, resources, education.
- * Protect traditional ceremonial uses i.e. fishing, drinking, aesthetics.
- * Environmental sustainability with economic development. Coordination of authorities.

Coeur d'Alene (day) GROUP F

Priority Concerns

- 1) People -- local economy, custom and culture, i.e. natural resource economy.
- 2) Family recreation, public use access.
- 3) Implementation, fund and enforce.
- 4) Industry participation.
- 5) Three issues tied for fifth:
 - a) Coordination and reconciliation at all levels -- agreement.
 - b) Local and state control.
 - c) Public access to lake model -- nutrient loading info.

General Concerns

- * Industry participation.
- * Balanced ecosystem management.
- * BMP's -- give sawyers responsibility for culvert and drainage structures installed during their work i.e. prevent soil erosion.
- * Public access to lake model -- nutrient loading info.
- * Local and state control.
- * Phosphate loading from boats and homes.
- * Realistic recreational use of lake.
- * Fighting Creek runoff.
- * Health.
- * Fiscally conservative.
- * People -- local economy, custom and culture i.e. natural resource economy.
- * Coordination and reconciliation at all levels/agreement.
- * Family recreation, public use access.
- * Heavy metals loading.
- * Implementation, fund and enforce.
- * Community needs natural resources.

Coeur d'Alene (day) GROUP G

Priority Concerns - Stage 1

- 1) Superfund cleanup and river above superfund.
- 2) Loss of floodplains, wetlands.
- 3) Pressures on lake -- heavy boating, traffic on river, bank erosion caused by boats.
- 4) Stormwater and drainage impacts.
- 5) Preserving expanding fisheries.

Priority Concerns - Stage 2

- 1) Development, construction, setbacks on slopes, lakeshore.
- 2) Nutrient loading from agriculture, mining and logging.
- 3) Public education, awareness, involvement.
- 4) Heavy metal pollution.
- 5) Land use planning, enforcement, regulation (leadership).

General Concerns - Stage 1

- * Adequate funding for implementation.
- * Heavy metals pollution (existing and additional).
- * Development on banks, slopes, shoreline, road building, setbacks.
- * Public awareness, education of public to importance, public involvement.
- * Preserving, expanding fisheries.
- * Stormwater and drainage impacts.
- * Consumer pressure on lake -- heavy boating, traffic on river, bank erosion caused by boats.
- * Land use planning, implementation, enforcement.
- * Interest group conflict resolution.
- * Preservation of visual qualities.
- * Agricultural/silvaculture input contribution (logging, mining, ag).
- * Agency management coordination (goal orientation).
- * Public access.
- * Loss of flood plains, wetlands.
- * Meeting management, maximize education and input.

- * Nutrient loading.
- * Superfund cleanup and river above superfund.
- * Tribal, state, county relations.
- * Sewage pollution.
- * Remediation of lower Coeur d'Alene River.
- * Lake bottom disturbance, fills.
- * Lakewater -- drinking source.
- * Election of sympathetic local and state officials.

General Concerns - Stage 2

- * Agriculture, mining, logging nutrients.
- * Public awareness, education involvement.
- * Development and construction on banks and slopes, i.e. setbacks.
- * Heavy metals pollution.
- * Adequate funding for implementation.
- * Land use planning, enforcement, regulations (leadership).
- * Fisheries -- preservation and use.
- * Stormwater, septic tank drainage impact.
- * People pressure and impact -- boating traffic, use, litter.
- * Loss of wetlands, flood plains.

Coeur d'Alene (day) GROUP H
(This group divided their list into goals & priorities.)

Priority Concerns

- GOALS:**
- 1) For Lake -- stabilize metals in place and manage nutrients to preserve beneficial uses.
 - 2) For Basin -- maintain or restore all beneficial uses and address health concerns.

- PRIORITIES:**
- 1) Funding and implementation.
 - 2) Erosion, including agriculture, forest practices and regulation.
 - 3) Stormwater, including roads and development.
 - 4) Sanitary waste, including nutrients.
 - 5) Preserve natural areas.

General Concerns

- GOALS:**
- 1) For Lake -- stabilize metals in place and manage nutrients to preserve beneficial uses.
 - 2) For Basin -- maintain or restore all beneficial uses and address health concerns.

- PRIORITIES:**
- 1) Funding and implementation.
 - 2) Erosion, including agriculture, forest practices and regulation.
 - 3) Stormwater, including roads and development.
 - 4) Sanitary waste, including nutrients.
 - 5) Preserve natural areas.

Coeur d'Alene (evening) GROUP E

Priority Concerns

- 1) Three items tied for first:
 - a) Improve fish and wildlife habitat by public purchase and improvement.
 - b) Involve public in policymaking on lake surrounding land use issues.
 - c) Public supported ombudsman for lake issues.
- 2) Educate public about proper use of the lake waters (courtesy, right-of-way, etc.)
- 3) Two items tied for third:
 - a) Maintain human and wildlife co-habitation and use of the lake and surrounding area.
 - b) Lack of enforcement of existing rules and regulations.

General Concerns

- * Develop method of reducing taxes, example: by conservation easements.
- * Rules and regulations are too vague and hard to enforce.
- * Improve fish and wildlife habitat by public purchase and improvement.
- * Involve public and policymaking on lake and surrounding land use issues.
- * Does fishing derby have effect on salmon population?
- * Change logging practices to minimize sediment into river and lake.
- * Public supported ombudsman for lake issues.
- * Rules and laws regarding riparian rights, the highway level, public access to beach areas.
- * Educate public about proper use of the lake waters (courtesy, right-of-way, etc.)
- * Recognize importance of the shallow bays.
- * Use the lake as a laboratory to acquaint children with lake ecology.
- * Monitoring of boat activity and impacts.
- * Maintain human and wildlife co-habitation and use of the lake and surrounding areas.
- * Lack of enforcement of existing rules and regulations.

St. Maries GROUP A

Priority Concerns

- 1) Want to maintain current uses of natural resources and present way of life in Benewah County.
- 2) More local government control in the project.
- 3) Wise multiple use management of all resources versus preservation/no use management.
- 4) Want economic stability for the area.
- 5) Preserve the culture, history and traditions of local community.

General Concerns

- * Wise multiple use management of all resources versus preservation/no use management.
- * Does good science tell us there really is a problem with the lake?
- * Want to maintain current uses of natural resources and present way of life in Benewah County.
- * Preserve the culture, history and traditions of local communities.
- * Concern that nutrient threshold may be so low as to limit our current manner of resource uses.
- * Want to see local government (county commissions) be responsible for final decisions.
- * More local government control in the project.
- * Am concerned about clean water.
- * The existing rules, regs, ordinances need to be tied into the process.
- * Would like to see public property exempt from management concerning this project.
- * Would like more disclosure on legislators (names) who promoted the Nutrient Management Act.
- * Want to have names and access to final legislative and others who will decide and promoted the lake management plan.
- * Want economic stability for the area.
- * More proof the scientific data is accurate -- two years of data seems inadequate.
- * Use common sense in drafting the lake management plan.
- * Need to control the current loading of metals going into the lake.

St. Maries GROUP B

Priority Concerns

- 1) Local economic survival and stability.
- 2) Preservation of private property rights in the watershed. (landowners)
- 3) Multiple use of land.
- 4) Development on lake with protection of natural resources.
- 5) Management based on sound science.

General Concerns

- * Local economic survival and stability.
- * Multiple use of lands.
- * Preservation of property rights in the water shed. (land owners)
- * Preservation of culture and heritage.
- * Limit community development.
- * Development on lake with protection of natural resources.
- * Greater local government representation.
- * Maintain and improve lake fisheries.
- * Management of tributaries of the Cd'A River, curtail loading.
- * Management that is economically feasible.
- * Landowner response toward pollution.
- * Riverbank/waterways stability. (landowner's right to maintain/mitigate, i.e. riprap)

St. Maries GROUP C

Priority Concerns

- 1) Economic stability.
- 2) Concern over properly identifying pollution sources.
- 3) Promote and support "common sense" economic diversity use of the lake.
- 4) How will final plan affect traditional uses "customs and culture" in the Cd'A Basin?
- 5) Three issues tied for fifth:
 - a) Government only by elected representatives of the people or their agents.
 - b) Maintain lake resources for human and wildlife co-habitation and development.
 - c) Data base should be over longer period of time (more than two years) (funding necessary).

General Concerns

- * Economic stability.
- * Maintain lake resources for human and wildlife co-habitation and development.
- * Less government control.
- * Government only by elected representatives of the people or their agents.
- * A stable PH level in water and soil adjacent to St. Joe and St. Maries Rivers.
- * How will final plan affect traditional uses "customs and culture" in the Cd'A Basin?
- * Concern that there is a place for future commercial development.
- * Promote and support "common sense" economic and recreational diversity use of the lake.
- * Why aren't there restrictions on farmers for soil erosion, chemical use and pesticides?
- * Plan alternatives should stress ways to mitigate impacts rather than eliminate activities.
- * Taxpayers money will not be spent unless appropriated by elected representatives.
- * Economic stability through stable water quality.
- * Data base should be over longer period of time (more than two years) (funding necessary).
- * Promote wise or multiple use.
- * Review and update zoning and taxation laws related to development.
- * Is data base accurate for conclusion on nutrient input?
- * Economic activities which contribute the most should have more input.
- * More monitoring of streams unaffected by human activity.
- * Concern over properly identifying pollution sources.
- * Develop a communication system for communities surrounding the lake to have the most input.
- * Coordinate with local elected officials on implementation.
- * Recreation uses.
- * Alternatives should not be selected for ease of implementation.
- * Could the industries be regulated further without seriously reducing their productivity?

Plummer GROUP A

Priority Concerns

- 1) No more clearcuts in lake drainages; no more clearcut burns -- maintain natural waterholding capacity of our forests.
- 2) Preserve our way of life by working with the logging, farming and commercial interests.
 - a) Federal, state and bureaus following the same laws, regs, standards as required on private lands.
- 3) Keep on monitoring the lake for 8-10 years before acting -- get more proof of conditions.
- 4) Repeal the Nutrient Management Act.
- 5) Study options of removing metals from lake sediments by creative methods.

General Concerns

- * No more clearcuts in lake drainages; no more clearcut burns -- maintain natural waterholding capacity of our forests.
- * Control of nutrient loading -- both agricultural nonpoint and point source (sewage).
- * Federal, state and bureaus following the same laws, regs, standards as required on private lands.
- * Keep on monitoring the lake for 8 to 10 years before acting -- have more proof of conditions.
- * Find fertilizers that don't impact water quality as much.
- * Maintain the swimmable, fishable standards (legally) in the lake.
- * Preserve our way of life by working with the farming, logging and commercial interests.
- * Repeal the Nutrient Management Act.
- * There have been large improvements in farming and logging practices: question whether there is a problem now.
- * Study options of removing metals from lake sediments by creative methods.
- * Maintain control development along 500 feet of lake shore.
- * Work towards controlling the seaweed and plants in the lake -- they are taking over in some places.
- * Maintain buffer zones along streams to prevent impacts by homes, logging, farming, grazing and roads.
- * Disallow boat traffic in St. Joe above 5 miles per hour -- is supposed to be by the "shadowy" St. Joe, not a race track.
- * Consider the downstream impacts in river and aquifer below the lake in Idaho and Washington.
- * Disallow the "let burn" policy on national forests -- too much sediment and nutrients.

Plummer GROUP B

Priority Concerns

- 1) Maintain status quo or improve level of metals, nutrients, sediments.
- 2) Ongoing public education.
- 3) Preserve the economic stability of the Coeur d'Alene basin.
- 4) NEPA requires consideration of "custom and culture" by government.
- 5) Two issues tied for fifth place:
 - a) Human health and fisheries issues related to heavy metals.
 - b) Preserve private property rights.

General Concerns

- * Human health and fisheries issues related to heavy metals.
- * Maintain status quo or improve level of metals nutrient sediments.
- * Preserve the economic stability of the Coeur d'Alene basin.
- * Preserve private property rights.
- * Increase in high paying recreational jobs.
- * Maintain or increase agricultural lands.
- * Preserve basin for human habitat.
- * Ongoing public education.
- * NEPA requires consideration of "custom and culture" by government.
- * Mental and physical health through natural resources job preservation.
- * Consider smaller drainages in the plan for management.
- * Protect quality of life.
- * Maintain metals at the bottom of the lake.
- * Involve elected local governments in formulating and implementing the plan. (local control)
- * Address lakeshore development.
- * Balance economic stability and recreation.
- * Tax monies spent only through direct appropriation by our elected representatives.
- * Increase productivity of fisheries and wildlife habitat.
- * Add Benewah County to the Management Committee.
- * Increase opportunity for the free market.
- * Control growth, development and access to critical areas.
- * Maintain or increase logging emphasis on salvage.

Kellogg GROUP A

Priority Concerns

- 1) Economic stability with existing custom and culture (natural resources industries).
- 2) Private property rights within the basin.
- 3) People should not be liable for what was legal at the time.
- 4) Study possible removal of heavy metals at bottom of lake with creative technologies.
- 5) No boat sewage dumping in the lake.

General Concerns

- * Raising and lowering of water level by Washington Water Power.
- * Consideration of economics when looking at regulating of nutrients into the lake.
- * High volume usage on rivers causing bank erosion.
- * Curtail clearcutting.
- * People should not be liable for what was legal at the time.
- * Nutrient loading.
- * Study possible removal of heavy metals at bottom of lake, with creative technologies.
- * Protection of county tax base.
- * Public awareness and education.
- * More public access sites to the lake.
- * Heavy bedload in the North Fork Cd'A River.
- * High paying recreational jobs vs low-wage recreational jobs/gambling.
- * No boat sewage dumping into the lake.
- * Private property rights within the basin.
- * Declassification of the St. Joe River Road as alternate I-90.
- * Economic stability with existing custom & culture. (Natural resource industries).
- * Construction on and near lakeshore including road building and runoff--less.

Kellogg GROUP B

Priority Concerns

- 1) Control of repeated inundations by Washington Water Power raising and lowering lake levels.
- 2) Control sewage treatment plant discharge.
- 3) Monitoring sedimentation from clearcuts and control runoff also roads.
- 4) Listen to the indians.
- 5) Adequate septic systems for chain lakes.

General Concerns

- * Sample wells on south fork, airport area, canyon, and others for metal content.
- * More enforced regulations on large development projects.
- * Adequate septic systems for chain lakes.
- * Cap on development
- * Control sewage treatment plant discharge.
- * Control of repeated inundations by Washington Water Power raising and lowering lake level.
- * Curtail marinas and large boats dumping sewage, oil and gas (also RV dump sites).
- * Control sediments and nutrients in runoff.
- * Monitor sedimentation from clearcuts and control runoff also roads.
- * Increase individual awareness.
- * Listen to the indians.
- * Check livestock that run too close to the lake shore.
- * Commercial fertilizer use for nutrient buildup.
- * Control sedimentation from logging, boats, lake level fluctuation.
- * Sewer the gulches.
- * Tributaries running through mine tailings.

APPENDIX C

Action items addressing non-water quality recreation concerns

The recreation subcommittee of the Development Technical Advisory Group developed several action items unrelated to water quality concern. These action items are the starting point for developing necessary management actions not directly related to water quality management.

APPENDIX C

Boat Use	Priority	Lead	Estimated cost	Funding Sources
Action 1: Develop protection measures (speed and proximity guidelines) for wetland birds, nesting and shoreline areas from turbidity resulting from jetskis and other boat operation around these areas.	2	County Comm.		
Action 2: Encourage good sportsmanship and reduced speeds.	2	County Comm.		

Attachment: Additional Areas of Concern - Activities on the Lake

Noise Levels	Priority	Lead	Estimated Cost	Funding Sources
Action 1: Require testing of motors for noise levels (with license application) and enforcement of acceptable noise levels (especially for jetskis). Jetskis are especially a noise problem to shoreline and lake property owners.	1	IDPR KC BC		

APPENDIX C

Safety and Enforcement Issues	Priority	Lead	Estimated Cost	Funding Source
Action 1: Standardize sign design, size and color of all signs in the 3 counties. Improve diver and swimmer identification for boaters and float-plane drivers.	1	WW Comm.		
Action 2: Increase safety inspections of boats by Sheriffs patrol.	2	WW Comm. KC, BC		
Action 3: Encourage greater enforcement capabilities through increased funding of the Countys Sheriff's Department.	1	KC, BC		
Action 4: Promote boater operator testing and licensing programs.	2	KC, BC WW Comm.		

APPENDIX C

Fisheries: Goal is to maintain or improve the sport fishery of Lake Coeur d'Alene and its tributaries.	Priority	Lead	Estimated Cost	Funding Sources
Action 1: Encourage restoration and maintenance native vegetation buffers along the lakeshore and lake tributaries.	1	IDL SCDs USFS BLM		
Action 2: Develop and implement a plan to maintain and, if necessary, improve the stability of stream channels on private, state and federal land. <ul style="list-style-type: none"> a) Require that some conifers be retained in the stream protection zone of Class II streams (to provide large organic debris (LOD) and maintain the stability of the stream) b) Increase stability the number of large conifers retained in the stream protection zone of Class I streams (to increase LOD). c) Add criteria for residual pool volume and riffle stability index to the state Water Quality Standards. 	1	IDL USFS BLM DEQ		
Action 3: Ensure that culverts placed in fish-bearing streams are accessible to fish; retrofit existing drainage structures which are inaccessible to fish; ensure culverts are sized for peak storm events and will accommodate expected debris as well as the discharge.	1	IDFG IDWR IDL USFS BLM		

Abbreviations:

BC	Benewah County		
CLCC	Clean Lakes Coordinating Council		
CT	Coeur d'Alene Tribe		
DEQ	Division of Environmental Quality		
EHD	East Side Highway District		
CES	U of I Cooperative Extension		
F&G	Idaho Dept. of Fish and Game		
ICL	Idaho Conservation League		
IDL	Idaho Dept. of Lands		
ITD	Idaho Transportation Dept.		
KC	Kootenai County		
KEA	Kootenai Environmental Alliance		
NICBA	North Idaho Building Contractors Assn.		
PAC	Panhandle Area Council		
		PGHD	Plummer-Gateway Highway District
		PHD	Panhandle Health District
		SC	Shoshone County
		SCS	Natural Resource Conservation Service
		SFCSD	South Fork of Cd'A Sewer Dist.
		USFS	U.S. Forest Service
		WHD	Worley Highway District

APPENDIX D

**Summary of written responses to a questionnaire and public
comments expressed during public meetings of April 1994**

May 13, 1994

COEUR D'ALENE LAKE MANAGEMENT PLAN

Summary of April, 1994 Public Meeting Comments

A questionnaire with five questions was handed out at each of the public meetings. A total of 76 questionnaires were turned in. A summary of the written comments is summarized below.

QUESTION 1: How do you use and/or enjoy Coeur d'Alene Lake?

The following activities were listed. The number of times the activity was mentioned is in parentheses ().

Boating (35)	Work (3)
Swimming (27)	Waterski (3)
Aesthetics (24)	Scuba diving (2)
Fishing (24)	Ice skate (2)
Cabin/Home (13)	Hiking (2)
Camping (9)	Hunting (2)
Non-motorized boating, sailing, canoeing (7)	Log transport/storage (2)
Recreation (7)	Photography (1)
Wildlife/bird watching (5)	No use (1)
Drinking water (4)	

QUESTION 2: Goals for the Lake Management Zones

The tally from the "straw vote" to determine management goals for the lake is:

Nearshore Zone:	44 - slow improvement
	29 - rapid improvement
Southern Lake:	46 - slow improvement
	28 - rapid improvement
Rivers:	49 - slow improvement
	24 - rapid improvement
Open Lake:	55 - slow improvement
	9 - rapid improvement
	11 - slow zinc improvement; maintain water quality for nutrients

QUESTION 3, 4, and 5: These questions asked respondents to list their ideas for pollution prevention strategies, remediation/clean up strategies and any other issues of concern. The written answers were combined for this summary. The responses fell into the following categories: agriculture, boating and recreation, development/land use planning, enforcement, fisheries and wildlife, funding, general pollution sources, general lake management planning, general pollution solutions/comments, lake level fluctuations, landfill, lower rivers, mining effects/heavy metals, public education, road building, stormwater, timber, wastewater, and other. The results are listed below:

AGRICULTURE

- Control sediment from agricultural areas; use BMPs - 9 comments
- Stop livestock grazing in streams and riparian areas - 5 comments
- Institute mandatory agriculture BMPs - 3 comments
- Improve farm practices - 2 comments
- Maintain grass seed production - 1 comment
- Maintain crop rotation program - 1 comment

BOATING AND RECREATION

- Eliminate wastewater dumping from boats, add dump stations - 13 comments
- Limit boat size - 9 comments
- Manage boat speed, wakes in rivers and open lake - 9 comments
- Expand public access/boat ramps - 7 comments
- Control powerboat use, wakes - 5 comments
- Bank erosion from boats - 3 comments
- Limit number of boats - 3 comments
- Don't expand public access - 2 comments
- Manage recreational shoreline use - 2 comments
- Eliminate/ban jet skis - 2 comments
- Public health hazards in recreation areas - 2 comments
- Boat safety - 1 comment
- Limit location of boats - 1 comment
- Restriction on activities in/around lake - 1 comment
- Boat noise - 1 comment

DEVELOPMENT/LAND USE PLANNING

- Control waterfront and basinwide development; better management of - 18 comments
- Manage fertilizer use - 5 comments
- Slow development - 3 comments
- Manage erosion from nearshore development - 1 comment
- Remove old boathouses on lake - 1 comment
- Limit number of marinas on lake - 1 comment

ENFORCEMENT

- Enforce current laws - 5 comments
- Enforce solid waste laws - 1 comment
- Enforce boating regulations 1 comment

FISHERIES AND WILDLIFE: ISSUES/HABITAT

- Manage wetlands for waterfowl - 7 comments
- Fisheries - 6 comments
- Wildlife habitat - 4 comments
- Curb bass fishing - 1 comment

FUNDING

- Seek funding sources - 2 comment
- Use some of local tax money to fund cleanup, diverted from other programs - 2 comments
- Don't increase fees/taxes to fund correction measures - 1 comment

GENERAL POLLUTION SOURCES

- Stop pollution at sources, source control - 14 comments
- Control erosion/sediment from all sources - 5 comments
- Control nutrient discharge - 1 comment
- Prioritize and control pollution at sources - 1 comment

GENERAL LAKE MANAGEMENT PLANNING

- Leave lake alone; do nothing - 3 comments
- Use cooperative and coordinated effort to find solutions - 2 comments
- Speed up studies, plan - 2 comments
- Give greater attention to nutrients vs. heavy metals - 2 comments
- Don't fix it unless it's broken - 2 comments
- No more studies - 1 comment
- Use common sense - 1 comment
- Don't know what needs to be done to manage pollution - 1 comment
- Involve public in process - 1 comment

GENERAL POLLUTION SOLUTIONS/COMMENTS

- Control weed encroachment - 9 comments
- Use non-phosphorous soaps - 2 comments
- Eliminate tire burning - 2 comments
- Dredge certain nearshore areas for boating access - 2 comments

- Protect wetlands as buffers/sinks for pollution - 1 comment
- Use biological control of phosphorous with plants - 1 comment
- Use oxygen infusions - 1 comment
- Don't dredge lake bottom - 1 comment

LAKE LEVEL FLUCTUATION

- Control water level fluctuation - 8 comments

LANDFILL

- Use better siting techniques for landfills; - 5 comments
- Manage landfill better - 1 comment
- Recycling - 1 comment

LOWER RIVERS

- Rip rap river banks - 10 comments
- No wake on St. Joe and Coeur d'Alene Rivers - 3 comments
- Ban powerboats on CDA River - 2 comments
- Limit boat size on rivers - 2 comments
- Manage boat speed, number of boats on CDA River - 2 comments
- Use natural methods to stabilize banks - 2 comments
- Restrict speed on St. Joe River - 1 comment
- Ban powerboats on St. Joe River - 1 comment
- Stabilize CDA River streambanks - 1 comment
- Army Corps of Engineers is preventing bank stabilization efforts - 1 comment
- Bank stabilization - 1 comment

MINING/HEAVY METALS

- Cleanup mining waste - 8 comments
- Heavy metal effects on biota - 1 comment

PUBLIC EDUCATION

- Educate public - 17 comments

ROAD BUILDING

- Control road building - 1 comment

STORMWATER MANAGEMENT

- Better management of stormwater - 6 comments

TIMBER

- Better management of timber harvests - 7 comments
- Stop clearcutting - 2 comments

WASTEWATER: TREATMENT PLANTS/SEPTIC SYSTEMS/COMMUNITY SYSTEMS

- Upgrade the wastewater treatment plant in Page, other treatment plants in watershed, - 14 comments
- Upgrade individual (septics) and community drainfields - 13 comments
- Sewer nearshore areas - 2 comments
- Eliminate discharges from wastewater treatment plants - 1 comment
- Cut off all discharges of raw sewage - 1 comment
- Use alternative sewage disposal systems - 1 comment
- Limit construction of central sewers around the lake 1 comment

OTHER/MISC: CULTURAL SITES, COMMUNITY STABILITY

- Private property rights - 1 comment
- Consider the economy of the community - 1 comment
- Individual responsibility - 1 comment
- Cost estimates in report are inaccurate (ie rip rap) - 1 comment
- Protect cultural sites - 1 comment
- Stop promoting North Idaho - 1 comment

QUESTION AND ANSWER SESSION: The following is a summary of the questions/concerns voiced during the public meetings. Questions fell into the following categories: pollution/data on nutrients and heavy metals, potential management options, the planning process, funding, implementation, enforcement, the questionnaire, Bunker Hill Superfund site, lateral lakes, Fighting Creek landfill, and other.

POLLUTION/DATA

Nutrients:

- What affect does the lake level fluctuation have? (3 questions)
- What causes oxygen increases/decreases in the lake? (2 questions)
- Is there a peer review of USGS data? (2 questions)
- Part of southern lake is man-made, why repair it? (2 questions)
- Is run-off the biggest nutrient loading problem?
- How do the water samples compare to samples taken from mountain streams?

- Was a comparison study done before the river at Cataldo was dredged?
- Is oxygen level as low as USGS says it is?
- Readings in southern lake may not be accurate because in high-water flood stage everything is flushed out.
- How long does phosphorous stay in the system in measurable quantities?
- What accounts for the 80% of naturally occurring phosphorous?
- How can you solve problems if samples have been taken above the St. Joe River?
- Why wasn't pH tested for?
- Are oxygen deficits caused more by sewage treatment than by heavy metals?
- How do ag practices contribute nutrients? Fertilizers?
- Won't the Cherokee Hills project increase pollution problems?
- The Conservation Reserve Program or grass seed weren't mentioned in terms of the farm land. They have a large effect on the sediment entering the lake.
- The study on the Flathead Lake in Montana concluded that less than 5% of the nutrients entering the lake are caused by man.
- What effect does the rice growing industry in Chatcolet Lake have on the lake?
- What kind of shape is the Spokane River in from the mouth of the river to the dam?
- What is the immediate effect of logging within a half mile or so of the lake?
- Concern voiced over the high level of ash in burn areas.
- What portion of the water coming into the lake comes from the St. Joe River?
- What's the history of sewerage around the lake?

Metals:

- Are there heavy metals in fish? (2 questions)
- If zinc contained in upper watershed, will zinc be eventually flushed out of the system?
- Do number of boats affect the release of heavy metals?
- What is the extent of heavy metal contamination in fish and wildlife below the Post Falls dam?
- What is the source of the zinc in Lake CDA? Is coming out of the CDA River or from another source?
- What level of zinc are we talking about? How many ppm? How does this compare with amounts in our drinking water?
- You've stated that the lake's condition has improved in the last 50 years because the tailings dumping was ended in the 1960s. Where are the tailings being deposited now?
- In the worst place, how thick is the layer of metals-contaminated sediment?
- From a heavy metals standpoint, how does the north end of the lake compare to the south end?
- Are any of these contaminants (metals) showing up in well water?
- Will the heavy metals that are trapped in the lake soak into the ground water?
- When the lake turns its water over twice a year, does this stir up the metals sediments?
- Will the lowering of the levels of zinc going into the lake increase eutrophication of the lake?
- Is it true that one way to trap the metals-contaminated sediments is to wait for clay deposits to come in and pack it down?
- The years of mining left heavy metals trapped in certain areas along the CDA River. Are those areas identified and are there plans for the clean-up of those areas? Will a 100-year flood help remove these sediments?

MANAGEMENT OPTIONS

- Are willow plantings an option for river bank stabilization?
- Are there hazardous materials involved in dredging?
- If zinc is a problem, shouldn't all boating be stopped on the CDA River?
- Are you considering no wake zones for nearshore areas?
- The draft says the cost of riprapping is \$100-\$1,000 per square foot, but Medimont project was only \$20 per square foot. A misleading statement like this could scare people away from this option.
- Certain parts of the lake are more sensitive than others; will those areas have different criteria?
- What is the likelihood of correcting the problems in Lake CDA, for example the Page wastewater treatment plant?
- Will development around the lake be limited?
- Is the management plan mainly focused on taking some of that metals-contaminated sediment out? -- It can't just stay there.
- Regarding nutrient loading, will you be able to work with the Dept of Lands to develop BMPs?
- Is there a concern over holding tank contents and detergents entering the lake? Would it be beneficial for the county to put up more signs regarding dumping of these contaminants?

PLANNING PROCESS

- Why don't we try to find out what's causing the problem instead of just trying to cure the problem by repairing it?
- Is WWP involved?
- Isn't the goal of this effort to have no one group take responsibility? -- Should we all work together?
- Is local government involved?
- Are private owners on the river approached any differently where the goals are concerned?
- Any thought given to forming a Legal TAG?
- Which TAG responsible for each area
- Will TAGs ideas be recommendations?
- TAGs told that they are bound by law to improve water quality. Maintain not an option. Could maintain be an option?
- Are there both short and longterm goals? Both should be set.
- Lake plan is an excellent idea
- TAGs need info, but don't know where to get it
- Clarify moving target of Rivers TAG/how far upstream?
- Have any studies been done on the fish and wildlife in the lake, and will those studies be included/considered when adopting the final plan?
- Are you going to look at other areas like Kalispell and Tahoe to compare the effects of development on the lake?
- How far have we really come in the last 15 years in developing a lake management plan? Some of the same groups on your TAGs are groups that caused impediments in adopting the plan 15 years ago. Are these people going to cooperate and get something done, or will they come to these meetings to minimize the effects on their own interests? (Commends work that's been done so far to get this plan underway.)

-If all the groups/people on the TAGs get together with the goal to improve the lake and each does something toward this goals, then the water quality in the lake will improve. (cooperation needed)

-When this plan is final, will it be reviewed annually or otherwise? Is this review process built into the regulatory structure of the plan?

FUNDING

-Who will pay the bill for implementation? (2 questions)

-Will private property owners have to foot the bill?

-Is would be nice if some current prop. tax money was used for maintenance or improvement of the lake.

IMPLEMENTATION

-How will the plan be implemented once completed? (2 questions)

-Why spend money fixing something that doesn't necessarily need fixing?

-Are you talking only about management or will there be remediation (e.g. dredging) as well?

-Will the final plan be voluntary or mandatory? How will it be enforced? Will the plan itself become law? Will it ultimately promote new regulations?

QUESTIONNAIRE

-Can you prioritize the management areas/pollution problems (nutrients/zinc/heavy metals) in terms of severity to make it easier to fill out form? (3 questions)

-Define slowly/rapidly (2 questions)

-What are the benefits of rapid improvement vs slow? (2 questions)

-The question of "slowly" or "quickly" is academic. If we choose quickly, where will the money come from?

-What is the impact on people living on the lake once the choice of slow or rapid is chosen?

SUPERFUND

-How does this effort relate to the Bunker Hill Superfund project?

-Are there plans for cleaning the Superfund site first? Wont that loosen sediments/metals?

-What is the effect of the Bunker Hill site on the CDA River?

LATERAL LAKES

-Are lateral lakes included in lower river zone?

-Is there info available to lateral lakeshore residents?

-Will there be public hearings on lateral lake study?

-Have shoreline studies been done yet?

-What area is encompassed in the lateral lake project?

-How will the CDA Lake Management Plan affect recreational use in the lateral lakes?
(need rivers to access lakes)

-Are there heavy metals in lateral lakes?

-How do lateral lakes fit into this plan?

LANDFILL

- Some property taxes went into the landfill at Fighting Creek--which further polluted the lake.
- How many more landfills like the one at Fighting Creek will be going in? When will they be cut off?
- The landfill attracts seagulls. Don't they also contribute pollution to the lake?

OTHER

- Will there be a study on human health risks if metals are released into water column?
- Will this project help the public understand that this is another chapter in a long history of basin problems?
- When will the USGS scientific report be released?